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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/677,468

10/02/2003

Walid N. Aboul-Hosn

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8496

36154 7590 10/13/2010
LAW OFFICE OF ALAN W. CANNON
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EXAMINER

NGUYEN, CAMTU TRAN

ART UNIT

PAPER NUMBER

3772

MAIL DATE

DELIVERY MODE

10/13/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/677,468	Applicant(s) ABOUL-HOSN ET AL.	
	Examiner Camtu T. Nguyen	Art Unit 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

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DETAILED ACTION

Response to Amendment

This Office Action is responding to applicant's amendment filed on 7/22/2010. Claim 25 is newly added.

Response to Remarks

Applicant's remarks against the primary reference of Aboul-Hosn on the premise that its intake cannula (20) distal end is extended within the aorta (column 5 lines 32-34) rather than extended within the left ventricle, and that modifying by Wang would not accomplish Aboul-Hosn's goal. Such remarks deemed persuasive.

The claims, however, have been carefully considered but are rejected based on the following interpretation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aboul-Hosn (U.S. Patent No. 6,858,001) in view of Wang (U.S. Patent No. 6,106,497).

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Aboul-Hosn discloses in a left side cardiac device (10) comprising a fluid delivery conduit (30) having an opening and an intake cannula (20), the fluid delivery conduit (30) is introduced into the left atrium (column 5 lines 24-30), the fluid delivery conduit (30) is filled with a saline solution (column 5 lines 44-46) clearly suggesting that the fluid delivery conduit (30) is in communication with a fluid source, and the intake cannula (20) is attached to a blood pump (50), column 5 lines 40-43.

Regarding independent claims 2 & 24 reciting a hemostatic seal sealing the opening of the fluid delivery conduit (30), Aboul-Hosn reference teaches its fluid delivery conduit (30) may be sealed by the use of silicone plug or similar hemostatis valve (column 5 lines 50-52).

Figure 7 illustrates the fluid delivery conduit (30) delivery fluid/saline solution while the intake cannula (20) removes fluid/blood.

The Aboul-Hosn reference performs left side cardiac support including introducing the intake cannula (20) is introduced in the left ventricle but does not teach intaking blood from the left ventricle through the cannula (20).

Wang discloses a system that accurately control the pressure and/or flow of gas into the heart cavity, essentially the Wang system is directed to left side cardiac support (see Summary of the Invention), the system comprising an intake tube (18) introduced in the left ventricle (33) for transporting blood from the left ventricle (33) through the intake tube (18) via apertures (column 5 lines 37-47).

Therefore, it would have been obvious to one skilled in the art to modify the Aboul-Hosn such that its intake cannula (20) having apertures when the intake cannula (20) is disposed in the

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left ventricle, taught by Wang, for purposes of expelling blood therefrom, thereby preventing air embolism during a heart procedure.

With regards to claim 3 & 4, in the Aboul-Hosn/Wang combination, in particular, the fluid delivery conduit (33) reduces/eliminates pressure differential between a location within the left atrium & the air outside of the heart.

Regarding claim 5, in the Aboul-Hosn/Wang combination, Figure 7 in the Aboul-Hosn reference illustrates the intake cannula (20) coaxially is disposed in the fluid delivery conduit (30).

Regarding claim 6, in the Aboul-Hosn/Wang combination, the intake cannula (20) would be introduced into the left ventricle (taught by Wang above) through the left atrium (taught by Aboul-Hosn)& obviously would passage through the mitral valve.

Regarding claims 20-21, in the Aboul-Hosn/Wang combination, specifically, the Aboul-Hosn reference discloses the fluid source is saline solution, which is a liquid source.

Regarding claim 22, in the Aboul-Hosn/Wang combination, it is obvious that the pressure in the atrium is lower than the pressure of ambient for fluid to flow from the fluid source into the left atrium.

Regarding claim 23, the Aboul-Hosn/Wang combination, specifically, the Aboul-Hosn reference discloses that its fluid delivery conduit (30) is secured in and terminates in the left atrium (column 5 lines 27-31).

Regarding claim 25, Aboul-Hosn/Wang combination, specifically, the Aboul-Hosn reference discloses that the fluid delivery conduit (30) is filled with a saline solution (column 5 lines 44-46) clearly suggesting that the fluid source of saline solution is connected to the fluid

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delivery conduit (30) and is external of the intake cannula (20), see Figure 1 in Aboul-Hosn reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camtu T. Nguyen whose telephone number is 571-272-4799. The examiner can normally be reached on (M-F) 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on 571-272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Camtu T. Nguyen/

Examiner, Art Unit 3772

/Patricia Bianco/

Supervisory Patent Examiner, Art Unit 3772